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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,968	12/31/2001	Niels Peter Emme	042933/301826	5435

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ALSTON & BIRD LLP  
BANK OF AMERICA PLAZA  
101 SOUTH TRYON STREET, SUITE 4000  
CHARLOTTE, NC 28280-4000

EXAMINER

LAM, HUNG H

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/029,968	EMME, NIELS PETER	
	<b>Examiner</b>	<b>Art Unit</b>	
	Hung H. Lam	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03/31/06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 19-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____.  | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/31/06 has been entered.

### ***Response to Arguments***

2. Applicant's arguments, see the remark on page 7, filed 03/31/06, with respect to the rejection(s) of claim(s) 19 and 34 under Uchino in view of Wakui have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made further in view of Robb.

With regarding claim 19 and 34, the Applicants argue that neither Uchino nor Wakui teaches the claimed transceiver and that the combination of Uchino and Wakui fails to teach or suggest a transceiver for both (a) illuminating objects in the angle of view of the camera and (b) providing a wireless connection between the terminal and other devices. The Examiner respectfully disagrees. Uchino teaches an infrared camera wherein an emitter (Fig. 6; 32) emits infrared light on objects for acquiring infrared images (Col. 3, Ln. 22-48). In the same field of invention, Wakui teaches a camera having an infrared transceiver port for detecting object

distance (Fig. 1; transmitter 17 and receiver 20) wherein a transmitting portion (17) of the transceiver port illuminates infrared light on an object (Col. 3, Ln. 52-60), and the receiving portion (20) of the transceiver port receiving reflected light from the object (Col. 3, Ln. 48-49; Col. 3, Ln. 60-65; it is noticed that the infrared light is inherently overlapped the angle view of the camera in order to accurately detect the object distance). Wakui further teaches that the transceiver is capable of communicating with other device (Col. 4, Ln. 30-44). Therefore, Uchino as modified by Wakui teaches the claimed invention.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the modifications provide an additional wireless communication function and a means for detecting object distance via infrared transceiver.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the

applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 19-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchino (US-6,580,459) in view of Wakui (US-6,023,292) and further in view of Robb(US-6,177,950).

With regarding to **claim 19**, Uchino discloses a mobile communication terminal comprising:

a digital camera having an angle of view (it is inherent that the digital camera has an angle of view),

Uchino teaches an infrared emitter for emitting a beam of infrared light (Col. 3, Ln. 22-48; Fig. 6; Infrared emitting portion 32, 25), whereby the angle of view of the digital camera and the infrared light beam are directed such that a substantial part of the angle of view is overlapped by the emitted infrared light beam so that objects in the angle of view may be illuminated by the infrared light beam (Col. 3, Ln. 22-25; Col. 3, Ln. 35-38; it is inherent that a

substantial part of the angle of view of the camera is overlapped by the emitted infrared light in order for the camera to acquire infrared images).

However, Uchino fails to disclose an infrared transceiver for emitting a beam of infrared light through which a wireless connection is also provided between the terminal and other devices, and that a transceiver receives through the port receiving infrared light reflected by the objects, which are illuminated, by the beam of infrared light.

In the same field of endeavor, Wakui teaches a camera comprising an infrared transceiver port (Fig. 1; transmitter IRED 17 and receiver PSD 20) for emitting infrared light to an object and receiving a reflected infrared light from the object in order to detect object distance (Col. 3, Ln. 43-68; it is noticed that the infrared light is inherently overlapped the angle view of the camera in order for the camera to accurately detect the object distance). Wakui further teaches that the transceiver is capable of communicating with other devices (Col. 4, Ln. 30-44). In light of the teaching from Wakui, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Uchino to include the infrared transceiver of Wakui in order to detect an object distance and communicate with other devices via infrared transmitter. The modifications thus improve the versatility of the camera.

However, Uchino in view of Wakui fails to disclose wherein the mobile communication terminal comprises a mobile phone.

In the same field of endeavor, Robb teaches a multifunctional portable phone (abstract; Col. 1, Ln. 4-15). In addition, Robb teaches the phone further comprises a reading head (2) such that a camera or infrared optical reading head for capturing data/ or images (Col. 5, Ln. 36-47). In light of the teaching from Robb, it would have been obvious to one of ordinary skill in

the art at the time the invention was made to integrate the device of Uchino and Wakui into a phone as claimed by Robb in order to provide a multifunctional portable phone. The modifications thus provide a fully integrated video teleconferencing, data entry, and image capture system (Robb: Col. 1, Ln. 8-15).

With regarding to **claim 20**, Uchino in view of Wakui and further in view of Robb discloses a mobile communication terminal wherein: the infrared light beam is movable (Uchino: Fig. 1; Col. 3, Ln. 15-16 {detachable}) and the direction of the infrared light beam is substantially aligned with the angle of view (Uchino: Col. 3, Ln. 34-48).

With regarding to **claim 21**, Uchino in view of Wakui and further in view of Robb discloses the mobile communication terminal comprising:

an infrared filter, which is movable in and out of the light path into the camera (Uchino: Figs. 1 and 3; Filter 43; Col. 4, Ln. 56-61).

With regarding to **claim 22**, Uchino in view of Wakui and further in view of Robb discloses a mobile communication terminal wherein:

the infrared filter has a first position in the light path and a second position out of the light path (Uchino: Figs. 1 and 3; Filter 43; Col. 4, Ln. 56-61; Col. 5, Ln. 5-9; Col. 5, Ln. 17-21).

With regarding to **claim 23**, Uchino in view of Wakui and further in view of Robb discloses a mobile communication terminal comprising:

an electro-mechanical or electronic actuator which moves the infrared filter from the first position to the second position and back (Uchino: Fig. 6; Selection Drive Unit 49; Col. 4, Ln. 56-61; Col. 5, Ln. 5-9; Col. 5, Ln. 17-21).

With regarding to **claim 24**, Uchino in view of Wakui and further in view of Robb discloses a mobile communication terminal comprising:  
a display which displays the image captured by the camera (Robb: Fig. 1A; display 4; Col. 5, Ln. 38- Col. 6, Ln. 35).

With regarding to **claim 25**, Uchino in view of Wakui and further in view of Robb discloses a mobile communication terminal wherein:  
an image captured by the camera is refreshed at regular intervals (Robb: Fig. 1A; display 4; Col. 5, Ln. 38- Col. 6, Ln. 35; it is inherent that the captured image must be refreshed at a predetermined interval in order for viewer of Display 4 to view images as desired).

With regarding to **claims 26-28**, Uchino in view of Wakui and further in view of Robb discloses a mobile communication terminal wherein:

at least 60%, 80%, and 90% of the viewing angle is overlapped by the infrared light beam (Uchino: Col. 3, Ln. 34-49; Wakui: Col. 5, Ln. 58- Col. 6, Ln. 28 wherein the infrared source is capable of emitting larger or smaller angular range).

With regarding to **claim 29**, Uchino in view of Wakui and further in view of Robb discloses a mobile communication terminal wherein:



the camera uses software which processes captured digital images (Uchino: software is inherently executed in the CPU 51).

With regarding to **claim 30**, Uchino in view of Wakui and further in view of Robb discloses a mobile communication terminal according wherein:

a focusing system which focuses the light coming into the camera (Uchino: Col. 3, Ln. 21-25; Col. 3, Ln. 35-48), which provides a first setting adjusted to characteristics of visual light and a second setting adjusted to the characteristics of the infrared light (Uchino: Col. 4, Ln. 56-61; Col. 5, Ln. 5-9; Col. 5, Ln. 17-21).

5. Claims 34-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchino in view of Robb and further in view of Wakui.

With regarding to **claim 34**, Uchino discloses a method of capturing infrared images comprising the steps of:

providing a mobile communication terminal comprising a digital camera and an infrared transmitter which emits a beam of infrared light (Col. 3, Ln. 22-47; Fig. 6; Infrared emitting portion 32 emits infrared light to objects).

However, Uchino fails to disclose a step of providing a mobile phone comprising a digital camera.

In the same field of endeavor, Robb teaches a multifunctional portable phone (abstract; Col. 1, Ln. 4-15). In addition, Robb teaches the phone further comprises a reading head (2) such

that a camera or infrared optical reading head for capturing data/ or images (Col. 5, Ln. 36-47). In light of the teaching from Robb, it would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the device of Uchino into a phone as claimed by Robb in order to provide a multifunctional portable phone. The modifications thus provide a fully integrated video conferencing, data entry, and image capture system (Robb: Col. 1, Ln. 8-15).

However, Uchino in view of Robb fails to disclose an infrared port through which the beam of infrared light is emitted and through which a wireless connection is provided between the mobile phone and other devices; and a step of illuminating objects with the beam of infrared light emitted by the transceiver through the infrared port and receiving infrared light with the transceiver through the infrared port which is reflected from the objects by illumination with the infrared light beam.

In the same field of endeavor, Wakui teaches a camera comprising an infrared transceiver port (Fig. 1; transmitter IRED 17 and receiver PSD 20) for emitting infrared light to an object and receiving reflected infrared light from the object in order to detect object distance (Col. 3, Ln. 43-68; the infrared light is inherently overlapped within the angle view of the camera in order for the camera to accurately detect the object distance). Wakui further teaches that the transceiver is capable of communicating with other devices (Col. 4, Ln. 30-44). In light of the teaching from Wakui, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Uchino and Robb to include the infrared transceiver of Wakui in order to detect an object distance and communicate with other devices via infrared transmitter. The modifications thus improve the versatility of the camera.

With regarding to **claim 35**, Uchino in view of Robb and further in view of Wakui discloses a method comprising the step of:

arranging the digital camera and transceiver (Uchino: Fig. 1; see infrared emitting portion 32 and Wakui: Fig. 1; transceiver 17 and 20) in substantially a same direction of view of objects on the mobile phone (Robb teaches the multifunctional portable phone having reading head 2 in Fig. 1A: abstract; Col. 1, Ln. 4-15).

With regarding to **claim 36**, Uchino in view of Robb and further in view of Wakui discloses a method further comprising the steps of:

providing an infrared filter used when capturing images with visible light (Uchino: Col. 5, Ln. 3-9), and

removing the infrared filter from the light path into the camera when capturing infrared images (Uchino: Col. 5, Ln. 20-25 ).

With regarding to **claim 37**, Uchino in view of Robb and further in view of Wakui discloses a method further comprising the steps of:

providing an infrared filter used when capturing images with visible light (Uchino: Col. 5, Ln. 3-9), and

removing the infrared filter from a path of the infrared light beam into the camera when the transceiver captures infrared images from the illumination objects (Uchino: Col. 5, Ln. 20-25; the object of the infrared image must be illuminated and reflected corresponding to the infrared beam generated by the infrared portion 32).

With regarding to **claim 38**, Uchino in view of Robb and further in view of Wakui discloses a method wherein:

the camera comprises an auto focus system and further comprising the step of adjusting settings of the auto focus system to characteristics of the infrared light when capturing infrared images (Uchino: Col. 3, Ln. 22-25; Col. 5, Ln. 17-25; infrared radiation irradiates toward auto focusing area).

With regarding to **claim 39**, Uchino in view of Robb and further in view of Wakui discloses a method wherein:

the mobile phone (Robb teaches the multifunctional portable phone: abstract; Col. 1, Ln. 4-15) comprises a display (Robb: Display 4) and further comprising the step of displaying images captured by the digital camera on the display (Robb: Fig. 1A; display 4; Col. 5, Ln. 38-Col. 6, Ln. 35).

With regarding to **claim 40**, Uchino in view of Robb and further in view of Wakui discloses a method comprising the step of:

capturing and displaying the images at intervals (Robb: Col. 5, Ln. 38- Col. 6, Ln. 35; the camera must display captured images on the display at a desired interval), which permits the mobile phone to be used as a night vision device (Uchino: Col. 5, Ln. 20-25; it is inherent that the camera can be used at night because it is capable of emitting infrared light and acquiring

infrared image; Robb teaches the multifunctional portable phone: abstract; Col. 1, Ln. 4-15; Uchino in view of Robb and further in view of Wakui discloses the claimed invention).

6. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchino in view of Wakui, in view of Robb and further in view of Bittner (US-6,304,728).

With regarding to **claim 31**, Uchino in view of Wakui and further in view of Robb disclose the same subject matter as claimed in claim 19. Except that Uchino, Wakui and Robb fail to disclose a mobile communication terminal comprising:

a lens cover having a first position covering the lens of the camera and a second position exposing the lens. However, the limitations are well known in the art as taught by Bitter.

In the same field of endeavor, Bittner teaches a camera having a lens cover (62) coupled to actuator 36 in order for the rotating lever (tab 42) to close or open the camera lens cover (Col. 6, Ln. 1-14; Fig. 2 shows closed lens-cover in first position; Fig. 3 shows the opened lens-cover in second position). In light of the teaching from Bitter, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Uchino, Wakui and Robb to include the lens-cover mechanism of Bittner in order to cover the lens in first position and expose the lens to the light path in second position. The modifications thus provide a long lasting camera by protecting the lens from being scratched, damaged or becoming dirty (Bittner; Col. 2, Ln. 10-15).

With regarding to **claim 32**, Uchino in view of Wakui, in view of Robb and further in view of Bittner discloses a mobile communication terminal comprising:

an actuator which moves the lens cover from the first position to the second position and back to the first position (Bittner teaches a camera having a lens cover {62} coupled to actuator 36 in order for the rotating lever {tab 42} to close or open the camera lens cover; Col. 6, Ln. 1-14; Fig. 2 shows closed lens-cover in first position; Fig. 3 shows the opened lens-cover in second position).

With regarding to **claim 33**, Uchino in view of Wakui, in view of Robb and further in view of Bittner discloses a mobile communication comprising a handle having a first position associated with the first position of the lens cover (Bitter; Fig. 2 shows closed lens-cover in first position), the handle having a second position associated with the second position of the lens cover and the first position of the infrared filter (Bitter; Fig. 3 shows the opened lens-cover in second position; the second handle position is interpreted as the initial condition wherein the opening of lens-cover causes the infrared filter to dispose into optical path for capturing visible light image), and the handle having a third position associated with the second position of the infrared filter (infrared image is commonly captured in low light environment or night vision, and thereby the third position must be associated with the second position of the infrared filter).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Kim (US-6,681,120) discloses mobile entertainment and communication device having night vision and image camera.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung H. Lam whose telephone number is 571-272-7367. The examiner can normally be reached on Monday - Friday 8AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NGOC YEN VU can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HL

06/05/06

  
NGOC-YEN VU  
SUPERVISORY PATENT EXAMINER